

Table II-4. (Striped bass continued)

Nursery Area,

Postlarvae and Juveniles:

ROANOKE RIVER - Roanoke delta, primarily Cashie River, and western Albemarle Sound in salinities zero to 7 ppt (Hassler et al. 1981; Rulifson et al. 1988).

TAR-PAMLICO RIVER - Hardee Creek above Washington in Tar River stretching to Pungo Creek in the Pungo River at salinities zero to 4.5 ppt. Major areas: Broad Creek and South Creek (Hawkins 1979).

NEUSE RIVER - Downstream from New Bern (Hawkins 1979).

Fertilization:

Striped bass eggs are released in open waters of rivers where they are fertilized. Require current for suspension in water column.

Hatching:

Incubation period ranges from 29 hours at 23.9°C to 80 hours at 12.2°C (Hardy 1978). Percent hatching success is correlated with substrate composition: coarse sand, 35.7%; plastic, 36.4%; silt, 13.1%, silty-clay, 3.2%, and muck detritus, 0.0% (Bayless 1968).

Feeding:

Active feeding initiated 4 to 10 days post-hatch; non-feeding larvae may exhibit reduced function of certain organs and tissues as early as 4.5 days post-hatch (Rulifson et al. 1986). Prey for Roanoke River larvae are small zooplankton crustaceans, primarily copepodid copepods and *Bosmina.

Water Quality:

Salinity tolerance of eggs ranges from zero to 10 ppt (Setzler et al. 1980). Eggs will hatch in waters of pH values above 5.5 and below 10.0 but fry survival is best within 6.5-9.5 (Shannon 1967). Sudden shifts in pH is lethal (Mehrl et al. 1986). Eggs and larvae are particularly sensitive to residual chlorine even at levels as low as 0.04 to 0.5 ppm (Morgan and Prince 1977, Middaugh et al. 1977). Striped bass larvae are classified as "sensitive" to suspended sediments (Morgan et al. 1973) and exhibit reduced survival at concentrations of 500 - 1,000 mg/l (Auld and Schubel 1978).

Swimming Ability:

Yolksac larvae attempt to swim toward the surface but sink between efforts. Newly-hatched larvae require sufficient turbulence to keep them from settling to the bottom and smothering (Setzler et al. 1980).

Chemical Tolerances:

Rehwooldt et al. (1971); Setzler et al. (1980).